REMARKS

This application has been carefully reviewed in light of the Office Action dated August 21, 2003 (Paper No. 11). Claims 1 to 45 are in the application, of which Claims 1, 3, 14, 16, 21, 23, 28, 44 and 45 are independent. Claims 1, 3, 12, 14, 16, 19, 21, 23, 26, 28, 39, 44 and 45 have been amended. Reconsideration and further examination are respectfully requested.

Applicant gratefully acknowledges the indication in the Office Action that Claim 33 recites allowable subject matter, and that it would be allowable if rewritten in independent form. Since Applicant believes that the independent claim from which Claim Claim 33 depends also recites allowable subject matter, Claim 33 has not been rewritten.

By the Office Action, Claims 1, 2, 6 to 11, 14, 15, 21, 22, 28 to 32, 41, 42, 44 and 45 have been rejected under 35 U.S.C. § 103(a) over U.S. Patent 5,548,722 (Jalalian) and U.S. Patent 5,353,399 (Kuwamoto), Claims 3, 16, 23 and 34 to 36 have been rejected under 35 U.S.C. § 103(a) over Jalalian, Kuwamoto and U.S. Patent 5,742,286 (Kung), Claims 4, 5, 12, 13,17 to 20, 25 to 27, 37 to 40 and 43 have been rejected under 35 U.S.C. § 103(a) over Jalalian, Kuwamoto and U.S. Patent 5,926,463 (Ahearn), and Claims 18 and 25 have been rejected under 35 U.S.C. § 103(a) over Jalalian, Kuwamoto, Ahearn and Kung. Reconsideration and withdrawal of these rejections are respectfully requested in view of the amendments and remarks presented herein.

Claims 1, 14 and 21

The present invention concerns the display of a system configuration, in which printer functionality is discriminatively displayed, using icons, to show which printers are ink jet printers and which are laser printers.

By virtue of this arrangement, it is possible to select printer functionality which is suitable for a particular print job. An ink-jet printer can be selected by a user to print photographs, while a laser printer can be selected to documents consisting of text or business graphics.

Turning to the specific language of the claims, Claim 1 defines a data processing apparatus which can perform data communication with various devices connected on a predetermined communication medium. The apparatus comprises an acquirement means, a management means and a virtual system configuration display means. The acquirement means stores a resource information structure and a status of each device by communicating with the various devices. The management means stores and manages the resource information structure and the status acquired by the acquirement means. The virtual system configuration display means causes a display unit to display a system configuration based on the resource information structure and the status stored and managed by the management means, such that icons capable of being discriminated for respective functions are displayed to be connected on a virtual network path, and further causes the display unit to discriminatively display, as icons, which printer has an inkjet printing function and which printer has a laser printing function.

The applied art, namely Jalalian and Kuwamoto, is not seen to teach or to suggest each and every feature of the invention, particularly with respect to displaying, as icons, which printer has an inkjet printing function and which printer has a laser printing function.

Jalalian is seen to describe a technique for displaying most-recently used devices and services, in which the names of most-recently used networked devices and

services are collected in a cache and in turn shown in a graphical user interface. (See Jalalian, Abstract) It is conceded in the Office Action, at page 4, that Jalalian does not show displaying a mark indicating that a device is capable of coping with color data processing. In addition, Applicant submits that Jalalian fails to show the feature of displaying, as icons, which printer has an ink jet printing function and which printer has a laser printing function.

Kuwamoto is not seen to remedy the deficiencies noted with respect to Jalalian. Kuwamoto is seen to describe managing shared resources by providing a display of a planar view of a building, which depicts the installation location of input/output devices in the building. (Kuwamoto, Abstract) At col. 7, lines 3 to 13, Kuwamoto is seen to describe displaying information, which indicates whether the printer is currently printing, by displaying a number of pages of a document waiting to be printed or by changing the brightness of the printer's icon to indicate an on/off state of the printer.

At col. 8, lines 48 to 66, Kuwamoto is seen to describe the display of information on a planar view of a facility. While Kuwamoto describes identifying a type of printer in the display, the printer type that is displayed in Kuwamoto is not seen to display, as icons, which printer has an ink jet printing function and which printer has a laser printing function. Rather, the printer type information provided in Kuwamoto is seen to indicate a cassette type (i.e., whether or not the printer is a two-stage cassette type printer) and/or a sheet feed type (i.e., whether the printer has a continuous or single sheet feed mechanism). (See Kuwamoto, col. 6, lines 32 to 67)

Kuwamoto is not seen to display, as icons, which printer has an inkjet printing function and which printer has a laser printing function.

Ahearn has also been reviewed. The portions of Ahearn cited in the Office Action are not seen to teach or to suggest the feature of displaying, as icons, which printer has an inkjet printing function and which printer has a laser printing function.

Therefore, for at least the foregoing reasons, Claim 1 is believed to be in condition for allowance. Further, Applicants submit that Claims 14 and 21 are believed to be in condition for allowance for at least the same reasons.

Claims 2, 4 to 13, 15, 17 to 20, 22 and 24 to 27 are each dependent from the independent claims discussed above and are therefore believed patentable for the same reasons. Because each dependent claim is also deemed to define an additional aspect of the invention, however, the individual consideration of each on its own merits is respectfully requested.

Claims 3, 16 and 23

The present invention generally concerns combining the respective functions of devices connected via a communication medium. Using an indiction means and icons representing the respective functions of the devices, a combination is indicated, the effectiveness of which is determined. If the function combination is determined to be effective and while the function combination is being executed, the present invention changes the display status of the icons corresponding to the functions indicated using the indication means.

By virtue of this arrangement, it is possible to combine functions (e.g., a scanning function and a printing function) of devices connected to a communication medium and to discern the status of execution of the combination (e.g., copy function) using displayed icons representative of the respective device functions in the combination.

Turning to the specific language of the claims, Claim 3 defines a data processing apparatus which can perform data communication with various devices connected on a predetermined communication medium. The apparatus comprises a first indication means, a first judgement means and a virtual system configuration display means. The first indication means is for use in indicating an arbitrary combination of the icons for the respective functions of devices on the predetermined communication medium displayed on the display unit. The first judgment means judges effectiveness of an arbitrary combination function indicated by the first indication means. When it is judged by the first judgment means that the combination function is effective, the virtual system configuration display means temporarily changes a display status of the icon for each function indicated by the first indication means from display statuses of other icons while the combination function is being executed..

The applied art, namely Jalalian, Kuwamoto and Kung, is not seen to teach or to suggest each and every feature of the invention, particularly with respect to indicating a combination of icons representing functions of devices, judging the effectiveness of the indicated combination, and temporarily changing the display status of the icon for each of the indicated functions from the display status of other icons while the combination function is being executed.

The Office Action indicates that Jalalian in combination with Kuwamoto discloses highlighting an icon, which temporarily changes the appearance of an icon. However and assuming for the sake of discussion only that such a combination is permissible, the combination is not seen to teach indicating a combination of device functions. In addition, it is conceded in the Office Action, at page 9, that Jalalian and

Kuwamoto fail to show judging the effectiveness of an indicated combination and temporarily changing the display status of the icon for each indicated function in the combination from the display status of other icons while the combination is being executed.

Kung is not seen to remedy the noted deficiencies of Jalalian and Kuwamoto. The cited portions of Kung are seen to describe a technique for installing software via a network using a drag and drop operation, with which one or more source objects, such as application programs and data files, are dragged and dropped onto a selection of one or more target objects, such as a hard drive of a computer system, to install the source object(s) on the target object(s). Referring to Figure 2B of Kung, the user selects the icon, or icons, representing one or more target objects, and selects one or more source objects. The user drags an icon representing the selection of source objects over one of the selected target objects to initiate the installation process. (See Kung, col. 6, line 9 to col. 7, line 46, Figure 4 and col. 10, line 25 to col. 11, line 17)

Col. 7, lines 48 to 60 of Kuwamoto is seen to describe changing an icon to indicate that the installation process is being performed on a target object. Kung describes using a graphical indication of a target object's rejection of a drop operation. (See Kung, Figure 2I and col. 7, lines 61 to 67) However, this is not seen to in anyway disclose or suggest judging the effectiveness of an indicated combination of functions of devices and/or changing the display status of the icon for each of the indicated functions of a combination during execution of the combination function, if the combination function is judged to be effective.

Accordingly, Kung, and in particular the cited portions thereof, is not seen to teach or to suggest using an indication means to indicate a combination icons representing functions of devices, judging the effectiveness of the indicated combination, and temporarily changing the display status of the icon for each of the indicated functions from the display status of other icons while the combination function is being executed.

Therefore, for at least the foregoing reasons, Claim 3 is believed to be in condition for allowance. Further, Applicants submit that Claims 16 and 23 are believed to be in condition for allowance for at least the same reasons.

Claims 12, 13, 19, 26 and 27 are each dependent from the independent claims discussed above and are therefore believed patentable for the same reasons. Because each dependent claim is also deemed to define an additional aspect of the invention, however, the individual consideration of each on its own merits is respectfully requested.

Claims 28, 44 and 45

Claim 28 defines a data processing apparatus which can perform data communication with plural devices connectable with a data communication path. The apparatus comprises a display control means which displays icons visually representing appearances of the devices connected on the data communication path, on a display unit. The display control means displays, on the display unit, an image representing the data communication path together with the plural icons respectively corresponding to the plural devices, such that the display control means disposes and displays the icons nearby the image representing the data communication path according to a connection status of the data communication path and the devices.

The applied art, namely Jalalian and Kuwamoto, is not seen to teach or to suggest each and every feature of the invention, particularly with respect to disposing and displaying icons nearby an image representing a data communication path according to a connection status of the data communication path and the devices.

The Office Action cites elements 131, 132 and 112, Figures 2A, 2B, 3B and Figure 7 of Jalalian as disclosing the above features. However, none of the cited portions of Jalalian are seen to dispose and to display icons representing devices nearby an image representing a data communication path according to a connection status of both the data communication path and the devices.

Figures 2A and 2B are seen to each show a menu for printer selection. Elements 112, 131 and 132 are seen to represent a workstation, printer and a file server, respectively. Figure 3B is seen to provide a listing of devices, device class, and an indication of whether or not each device is connected to the network. Figure 3B is not seen to show a connection status of a communication path. Figure 7 is seen to show devices that are connected to a user's workstation.

However, the cited portions of Jalalian are not seen to teach or to suggest disposing and displaying icons nearby an image representing a data communication path according to a connection status of the data communication path and the devices.

Based on the above discussion of Kuwamoto, it is also not seen to teach or to suggest disposing and displaying icons nearby an image representing a data communication path according to a connection status of the data communication path and the devices.

Therefore, for at least the foregoing reasons, Claim 28 is believed to be in condition for allowance. Further, Applicants submit that Claims 44 and 45 are believed to be in condition for allowance for at least the same reasons.

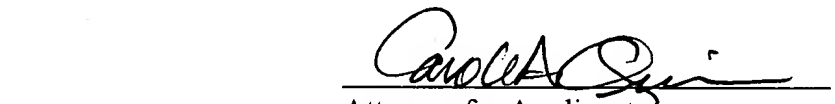
Claims 29 to 43 are each dependent from Claim 28 discussed above and are therefore believed patentable for the same reasons. Because each dependent claim is also deemed to define an additional aspect of the invention, however, the individual consideration of each on its own merits is respectfully requested.

CONCLUSION

In view of the foregoing, the entire application is believed to be in condition for allowance, and such action is respectfully requested at the Examiner's earliest convenience.

Applicant's undersigned attorney may be reached in our Costa Mesa, California office at (714) 540-8700. All correspondence should continue to be directed to our below-listed address.

Respectfully submitted,



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